

## **CIVIL ENGINEERING AND ENGINEERING ALUMNI INDUSTRIAL COUNCIL MEETING MINUTES**

**September 7th, 2012** – 12:00 p.m. – 4:15, Student Union Ventana Room

**Members Attending:** Jerry Cannon, Kathy Chavez, Lee Faris, Alan Forrest, Eric Froberg (telecom), Charles Gajda, James Glock, Tadd Johnson, Kevin Josker, Therese Lane, Kevin Lansey, Scott Larson, George Maseeh, Travis McCarthy, Ann Moynihan, Bill Nelson, Mark Taylor, Nathan Palmer, Stan Turney, Robin West, Mark Woodson.

**Members Who Sent Regrets:** Gary Barras, Mo Ehsani, Joe Gervasio, Dave Gildersleeve, Dave Mahaffy, Mick Mathieu, Thomas McGovern, Thomas McLean, Farhad Moghimi, Dean Papajohn, Claudia Perchinelli, Robert Wortman and Dave Zaleski.

**Absent:** Robert Barksdale, Michael Barton, Seth Chalmers, James Davey, Tom Draeger, John Evans, Chris Grubbs, Juan Lopez, Ed Nowatzki, William Palmer, Nancy Patania Brown, Robert Rasmussen, and Ken Wright.

**Others Attending:** Jeff Hunt, Mark Hickman, Yi-Chang Chiu, Jennifer Duan, Eric Hopkins, Fernando Gastelum, Jose Aguilar, and Michelle Bording.

### **Welcome and Introductions**

Scott Larson called the meeting to order at 12:00 P.M. and all attendees introduced themselves. Tadd Johnson Mark Taylor our newest members were in attendance. Jeff Hunt from Cypress attended the meeting as Dr. Lansey's guest.

### **Society of Civil Engineers Student Group**

Jose Aguilar, Eric Hopkins, and Fernando Gastelum updated the group on the plans for this year's activities. Career Night will be Wednesday, October 10th from 6-8 p.m. They have decided not to host a golf tournament this year and opted to host a Casino Night as a fund raiser instead. The date is still to be determined. They plan to continue their STEM outreach at Cottonwood Elementary, volunteer at E-Week on campus, Stuff The Bus food drive, highway clean up and Habitat for Humanity. The PSWA Conference will be at the USC-LA. The PSWA Conference will be at the University of Arizona in 2015 so the club needs to raise about \$100K before then.

### **Grad Student Special Report**

Michelle Bever earned her Bachelor's degree in Civil Engineering in 2008 and her Masters in 2012. Her master's report was to study the loss of drafters in Arizona since 2006. She had interned for a civil engineering company during her undergrad career and returned this year to the same company to find the structure of its workforce reduced and changed. The reduction was due to the economy but the fact that all of the drafters were gone made her decide to survey several companies in Arizona to find out if her hypothesis of the loss of drafters due to improved software capabilities could be correct.

She mailed the surveys to 232 companies in Arizona and had 29.3% responded. The questions on the survey included what the composition of the office looked like, what software was used, and the age of the company. Her data analysis showed that from 2007 and 2012 approximately 100 jobs were lost in the civil fields but the environmental and wastewater firms had grown. Those firms using CADD Civil 3-D lost the most drafters. The trend is for design and drafting to be done by one person now. Engineers and students should be aware of the tumultuous nature of the discipline and prepare themselves accordingly.

### **Review of the Minutes**

The minutes from March 2012 were reviewed and approved unanimously.

### **Treasurer's Report**

David Zaleski was unable to attend the meeting so Therese Lane reported that the amount still needed for the Homecoming Barbecue and Centennial Lecture is \$4,700. The food will be paid directly by Quakewrap and Structural Grace this year. Their contributions are very much appreciated. Scott Larson and his family donated a basketball for the raffle and more donations are needed. Having a cash bar at homecoming was discussed to save money but the University only allows 10 special alcohol permits per year for whole University and the chances of our getting one are slim so that idea was put to rest.

This year's homecoming events will be the Centennial Lecture on Friday, November 9<sup>th</sup> and the CEEM Barbecue on Saturday, November 10<sup>th</sup> three hours prior to kick off.

We currently have 17 Mohr's Circle members who have donated \$1,000 or more and have made a commitment to donate at least that amount every year. The hope is to grow the group.

### **Bylaws and Membership**

There was no report given

### **Election of Officers**

The election was done by ballot for the two year terms. Nathan Palmer was on the ballot for Chair, Ann Moynihan was on the ballot for Secretary/Treasurer and there was room for voters to write in a candidate. Chuck Gajda said he was willing to run for Vice-Chair. Ballots were collected and counted by Therese Lane. The results were unanimous and announced at the end of the meeting. Nathan Palmer was elected Chair, Chuck Gajda was elected Vice-Chair and Ann Moynihan was elected Secretary/Treasurer.

### **Department Head Report**

Department Head Kevin Lansey gave the current numbers of the Department. There are 122 undergraduate students, 44 BS graduates and 20 MS/PhD students. There are 63 graduate students. There are 11 faculty and 4 staff. The IT staff from all the college departments was moved to the college. We have \$2.2M in Research. There are approximately 600 freshmen in the College of Engineering this semester and the average SAT scores are over 1260. There is an increasing number of No Major Selected (NMS) and we are urging Dean Baygents to push these students to departments earlier. The Surveying class was cancelled for the fall due to under enrollment even though there are 60 enrolled in CE graphics. There are about 30 grads for spring of 2013. The department needs approximately 45 students to break

even in the RCM (Responsibility Centered Management) with the present faculty. Limit on junior classes to 50-60 students. In an effort to increase enrollment the Department is hosting a recruiting night and showing an Extreme Engineering video and having a faculty/practitioner led discussion afterward. The Department is also working to attract more distance education students.

Mark Hickman was promoted to full professor and Hamid Saadatmenesh will be returning from a four year leave in the fall 2013. The breakdown of the faculty is: Chiu, Hickman – Transportation, Fleischman, Haldar - Structures, Duan, Lansey – Hydraulics, Frantziskonis, Kundu – Eng. Mechanics, Budhu, Zhang – Geotechnical.

Faculty recruiting continues as we seek mid-career rising stars, leaders for large team projects. Three candidates visited last year and we will continue the search. Dr. Katerina Aifantis fits the strategic priorities faculty initiative, special hires in University directions and Engineering Mechanics – Materials Biomed.

The budget for the fall of 2012 is similar to last year's budget. We have taken a 5% cut. The University transitioned to then away from the RCM but President Hart will reinstate the RCM of which the CEEM revenue is largely from tuition. There has been no loss of personnel but we are missing some adjunct salary. We still need to purchase or make lab equipment safety shields for our aging equipment. We are also installing eye washes in the labs, have cleaned up the wet room and are now using concrete curing boxes and are upgrading our electrical in some of the labs.

Additional revenue opportunities for us are distance undergraduate 2+1+1, distance graduates, philanthropy, summer classes, and graduate tuition. The Mohr's Circle has 17 members who have pledged to donate a minimum of \$1,000 per year. Our members are: Arcadia, AzSCE S AZ Branch, CH2M Hill, Foster Wheeler North America Corp., Joseph Gervasio, Kevin and Diana Lansey, M3 Engineering & Technology, Tom McGovern, Ed and Pat Nowatzki, Quakewrap Inc., RBF Consulting Foundation, Salt River Project, Structural Grace, Sundt Construction Co., The Ashton Company, URS, and Woodson Engineering and Surveying. The funds from Mohr's Circle cover salary for practitioner adjuncts, homecoming events, some SCE student support, and graduation ceremonies. Additional funds are needed to extend operation, invite speakers, unexpected expenditures, faculty travel to funding agencies, and start up funds for new faculty.

We had an anonymous donor give \$25K for finite element software, civil view publication, support SCE, CEM instructor and a new copier.

Mrs. Alice Dempster gave \$25K for the upgrade of the Tinious-Olsen testing machine. We have 31 scholarships that distributed \$93K to 32 students.

The Construction Management course has begun this fall with 24 students. This course had its curriculum developed largely by industry and is taught by Dean Papajohn. It is largely donor supported.

The distance education 2+1+1 program (2 year community college, 1 year distance education and the last year on campus) draws from these community colleges: EAC, AWC, CAC, CCC, PCC, PVCC. We are working to make this program more accessible and to determine who the final audience will be both within and outside of the U.S. We are in discussions with UAE/Dubai. We are considering international short courses, market analysis and a graduate program in Mexico and South America.

There are new graduate school opportunities such as the Master of Engineering which is coursework only with 30 units of which would be an engineering management and math courses. Another option is the Accelerated Masters (MEng or MS). We have 6 spring graduates, 2 on-going students and 4 have joined the program this fall.

Dr. Lansey reminded the group of our upcoming homecoming activities. Our Centennial speaker will be Dr. Wylie Bearup who will be talking about the light rail experience in Phoenix at 11 a.m. on Friday, November 9<sup>th</sup> after the Engineering Breakfast. Then on Saturday, November 10, 3 hours prior to kickoff we will have our 7<sup>th</sup> annual barbecue with burgers, brats and beer in the Civil Engineering courtyard. The Banjo Blasters are scheduled to play again this year. Please RSVP to 621-2266 or [ceem@eengr.arizona.edu](mailto:ceem@eengr.arizona.edu)

A steel fabricator is being sought out to donate steel and or labor to create a sculpture highlighting the many different steel connections based on a sculpture done at the University of Florida. Please let us know if you know of any contacts that may be interested. This sculpture would go in the lawn in front of the Civil Engineering Building.

Brief discussion points were guidance on strategic directions, short courses (market survey), guidance on how to approach ADOT, links with industry for sensors, collaborative proposals, SBIR/STTR, and the Alumni/Industry lunch.

Background for the mentoring breakout session was that faculty mentoring has been poor, the student mentoring expectations are low, we would need multiple industry contact to give suggestions and volunteer. We need help developing a mentoring plan with expectations, mentee expectations and advising/recruitment.

For the ABET session we have been given the maximum of 6 years for our general review. On our site visit in November, the weaknesses revealed that our program objective evaluations and program outcome evaluations are weak. We also need expectations for graduate objectives defined such as acceptable achievement levels and review and assess objective achievement with stakeholders.

The AIC/Alumni involvement session will look at how our Department can be a better partner, how we can make the AIC more valuable to AIC members and firms, how can we benefit constituents and what would the AIC like to have discussed that the meetings.

**Breakout Session (3 Groups) 1. Mentoring led by Scott Larson, 2. ABET Interaction led by Kevin Lansey and 3. Keeping Alumni Associated with the University led by Tadd Johnson.**

Summary of the session groups:

- 1.) Mentoring notes
  - a. Technical mentor
  - b. Professor has list of mentors → Look to professional societies and alumni
  - c. SCE – meeting notification
  - d. Focus on those going to industry
  - e. Forced mentor

## 2.) ABET Break-Out

### a. Objective #1:

#### i. Survey – Compare DDTD with similar MERRIC

1. i.e. Compare 1-Year Grads, 3-Year Grads, 5-Year Grads
2. OR survey 5-Year Grads; trend line on 5-Year Grads

#### ii. Goal for **PE success** → 75% (National Average = 70%)

#### iii. Survey question: Is PE required for your job?

#### iv. Goal for **mastered engineering software** → 75%

### b. Objective #2:

#### i. Goal for membership → 70%

#### ii. Goal for career development → 60%

#### iii. Survey question: Learned new skills (not software)

### c. Objective #3:

#### i. Survey question: Acted as task manager/assistant manager/(not professional engineer)

#### ii. Goal mentoring (STAFF) → 25%

## 3.) Alumni Involvement

### a. Use social media (Facebook/Twitter/LinkedIn)

### b. Record AIC Meeting

### c. A physical mailer with an invite to join AIC

### d. Publicize UA needs

### e. Invite Alumni to present to classes

### f. SHARE responsibility

### g. Restructure Comm. class/ add tech. writing class as continued education

The 3 groups will continue to meet independently of the AIC to help the department move forward with the suggestions made in each of these groups.

### **Next AIC Meeting:**

Next meeting date is Friday, April 12<sup>th</sup>, 2013 in the Student Union Ventana Room on Level 4. The meeting will begin at noon with a light lunch beginning at 11:30 a.m.

### **Installation of Officers**

The new officers were announced and the outgoing officers, Scott Larson, Mark Woodson and David Zaleski were thanked for their service.

### **Meeting Adjourned:**

The meeting was adjourned at 4:45 p.m.